

Mon - 8 May 2023

NASA Headquarters Update

9:00 am Welcome/program update for NASA Ocean Biology & Biogeochemistry/ Advanced Science Plan/ Community Q & A – L. Lorenzoni / NASA

Marine Debris Detection

10:00 am Optical remote sensing of marine debris: what's possible and how? C.Hu/USF
10:12 am SQOOP: Spaceborne quantification of Ocean micro-Plastics H. Dierssen / U. Connecticut
10:24 am Fluorescence Lidar for Ocean Research and Observations (FLORO) investigates lidar measurements- M Cowell/ Ball Aerospace
10:36 am V. Chirayath / U. Miami
10:48 am Toward Optical Characterization of Marine Microplastic Pollution R. Foster/NRL

11:00 BREAK

Advances in foundational and future optics

11:20 am Uncertainties in Remote Sensing Reflectance Product from Ocean Color Satellite Sensors - A Gilerson/CCNY
11:32 am Developing a data-driven model to minimize adjacency effects in Landsat-8 imagery C. Begeman / SSAI
11:44 am CALIGOLA and POLCUBE: Introduction of Measurement Capability Y. Hu / NASA Langley
11:56 am Advantages of lidar for ocean research: spotlight on CALIPSO and ICESat-2 K. Bisson / OSU
12:02 pm Quantifying uncertainty via machine learning models in aquatic remote sensing A. Saranathan / SSAI
12:14 pm Cross-calibration of ocean color sensors in polar orbit using an intermediary geostationary sensor J. Tan / SIO

12:20pm LUNCH

Carbon and climate

1:40 pm EXPORTS update – I. Cetinić / GSFC
2:00 pm Sea Surface pCO₂ reconstruction and assessment in the Western Arctic Ocean under a changing climate Y.Li / U. Delaware
2:12 pm Ocean carbon and oxygen response to Mt Pinatubo – G. McKinley/ Columbia U

Land ocean continuum

2:24 pm A Land to Sea Paradigm: Impact of Spatially and Temporally Varying Nutrient and Freshwater Fluxes on Coastal Carbon Dynamics in the northern Gulf of Mexico M. Gierach/JPL
2:36 pm Estimating carbon fluxes using remotely sensed river discharge J. Gehring/ Northeastern
2:42 pm Scaling patterns and tradeoffs in ecosystem resistance and resilience Lerner / TAMU
2:48 pm Dissolved organic carbon and particle dynamics in Mississippi-Atchafalaya deltaic system using adaptive semi-analytic and multi-satellite approach E. D'sa/Louisiana State U.
3:00 pm Mapping Concentration and Carbon Content of Total Suspended Solids in the Coastal Marshes and Estuaries of Louisiana Using Imaging Spectroscopy J. Harringmeyer / BU
3:06 pm Quantifying the global sink of CDOM by photobleaching in the surface ocean using remote sensing X. Zhu / BU
3:12 pm Impact of islands on ocean ecology G. Bourdin / U Maine

3:18 pm BREAK

Little life: marine phytoplankton and zooplankton

3:30 pm Copepods from space: detecting swarms of *Calanus* in the Gulf of Maine C. Mitchell/Bigelow
3:42 pm Phytoplankton community structure in the Tropical Atlantic A. Subramaniam/Columbia
3:48 pm Diel Vertical Migrations of Mesozooplankton: Asymmetry in Swimming and Mixing Y. Su / Brown U
3:54 pm Regional and basin scale trends in ocean NPP linked to climate change - J Wu/ Columbia

Icy ecosystems

4:00 pm S. Bushinsky / U Hawai'i Manoa
4:12 pm Remote Sensing of Biophysical Properties in Coastal Arctic Waters – Preliminary Results W. Moses/NRL
4:24 pm Arctic Deltas and Coastal Margins as Buffers and Transformers of Carbon M. Tzortziou/CCNY
4:36 pm Assessing the lateral transfer of dissolved organic carbon from North American boreal terrestrial ecosystems to the Arctic Ocean using observations and models C. Fichot / BU
4:48 pm Characterizing Northern Alaskan river runoff over sea ice during spring freshets using remote sensing reflectance spectra L. Catipovic / WHOI

4:54 pm Wrap up day 1, L. Lorenzoni

Tues - 9 May 2023

9:00 am Welcome/ introduction to day 2 – L. Lorenzoni / NASA Headquarters

Ocean biology and biogeochemistry: Our Science – spotlight on MUREP

9:10 am Focused mentoring and wider workshops to connect high school students with NASA science J. Beckler / FAU
9:25 am Genomic-to-space measurements reveal global ocean nutrient stress A. Martiny/UCI
9:40 am Engaging Students and Stakeholders in Predictions of Harmful Algal Blooms M. Peacock / NWIC
9:55 am Integrating Systems Models and Remote Sensing to Explore Aquatic Ecosystem Vulnerability to Global Change in Lake Huron C. Calvo (on behalf of J. Martina)/Texas State U.
10:10 am Remote Sensing of Sargassum Accumulation and Impacts on Tropical Marine Ecosystems R. Armstrong/UPR
10:25 am Wildfire impacts on watershed transport of carbon to coasts M. Lopez on behalf of E. Hestir/U. Merced / JPL
10:40 am Mapping coastal vulnerability to sea-level rise to support healthy coastal communities in Hawai'i J. Burns /U. Hawai'i
10:55 am Building and Evaluating Pipelines to Identify Submerged Kelps in New England from Remote Sensing Imagery J. Byrnes/UMass. Boston
11:10 am Sometimes you have to walk first: public databases, *Sargassum* inundations, and downstream nutrient fluxes in the Caribbean E. Cruz-Rivera/Morgan State & UVI

11:25 am BREAK

NASA Ocean Biology Processing Group updates

11:50am NASA Ocean Biology Processing Group update – B. Franz / NASA GSFC
12:10 pm SeaBASS C. Proctor, I. Soto / NASA GSFC
12:30 pm Field program support group update (in situ protocols, fieldwork) – A. Mannino / NASA GSFC

12:40 pm GLIMR – A. Mannino on behalf of J. Salisbury / NASA GSFC

12:50 pm LUNCH

NASA flight/mission updates

2:00 pm Flight program updates (PACE and PACE SVC) – J. Werdell/ NASA GSFC

2:20 pm PACE SAT updates – H. Dierssen/UCONN

2:35 pm PACE Applications updates – M. Tzortziou/NASA GSFC

2:45 pm SBG – K. Turpie/UMBC

2:55 pm AOS – K. Knoblespiesse/GSFC

3:05 pm BREAK

Existing, emerging, and future of remote sensing

3:30 pm Tracking the wildfire response of California's giant kelp forests L. Berberian / UC Merced

3:36 pm Fish from space: Acoustic and remote sensing data fusion reveals the dynamics of mid-trophic level organisms J. Guiet / UCLA

3:48 pm Demonstrating Fresh and Coastal Water Products from PACE/OCI Proxy Observations R. O'Shea /SSAI

3:54 pm Aquaverse: An Aquatic Inversion scheme for remote sensing of fresh and coastal waters A. Ashapure /SSAI

4:00 pm Atmospheric CO₂ observations over the ocean from OCO-2: Challenges and Opportunities A. Chatterjee/JPL (OCO)

4:12 pm Toward Understanding the Drivers of Global Kelp Forest Dynamics T. Bell / Whoi

4:24 pm Evaluating the Use of Satellite Remote Sensing for cyanoHAB Public Health Warnings B. Lopez Barreto / UC Merced

4:30 Wrap up – L. Lorenzoni / NASA Headquarters

Adjourn to JSW poster session